

F2

--A CTP-CP4 EPSPS fusion was constructed between the *Arabidopsis thaliana* EPSPS CTP (Klee *et al.*, 1987) and the CP4 EPSPS coding sequences. The *Arabidopsis* CTP was engineered by site-directed mutagenesis to place a *Sph*I restriction site at the CTP processing site. This mutagenesis replaced the Glu-Lys at this location with Cyst-Met. The sequence of this CTP, designated as CTP2 (SEQ ID NO:10), is shown in Figure 9. The N-terminus of the CP4 EPSPS gene was modified to place a *Sph*I site that spans the Met codon. The second codon was converted to one for leucine in this step also. This change is reflected in SEQ ID NO: 70. This change had no apparent effect on the in vivo activity of CP4 EPSPS in *E. coli* as judged by rate of complementation of the AroA allele. This modified N-terminus was then combined with the *Sac*I C-terminus and cloned downstream of the CTP2 sequences. The CTP2-CP4 EPSPS fusion was cloned into pBlueScript KS (+). This vector may be transcribed in vitro using the T7 polymerase and the RNA translated with ³⁵S-Methionine to provide material that may be evaluated for import into chloroplasts isolated from *Lactuca sativa* using the methods described hereinafter (della-Cioppa *et al.*, 1986, 1987). This template was transcribed in vitro using T7 polymerase and the ³⁵S-Methionine-labeled CTP2-CP4 EPSPS material was shown to import into chloroplasts with an efficiency comparable to that for the control Petunia EPSPS (control = ³⁵S labeled PreEPSPS [pMON6140: della-Cioppa *et al.*, 1986]).--

At page 104, please replace the sequence listing by the substitute sequence listing attached herewith.

IN THE CLAIMS

Please amend claims 102-104, and 107 to read:

- F3*
- 1* 102. An antibody immunoreactive with a 5-enolpyruvylshikimate-3-phosphate synthase enzyme, wherein the enzyme comprises SEQ ID NO: 3 or SEQ ID NO: 70.
- 2* 103. The antibody of claim 102, further defined as a polyclonal antibody.